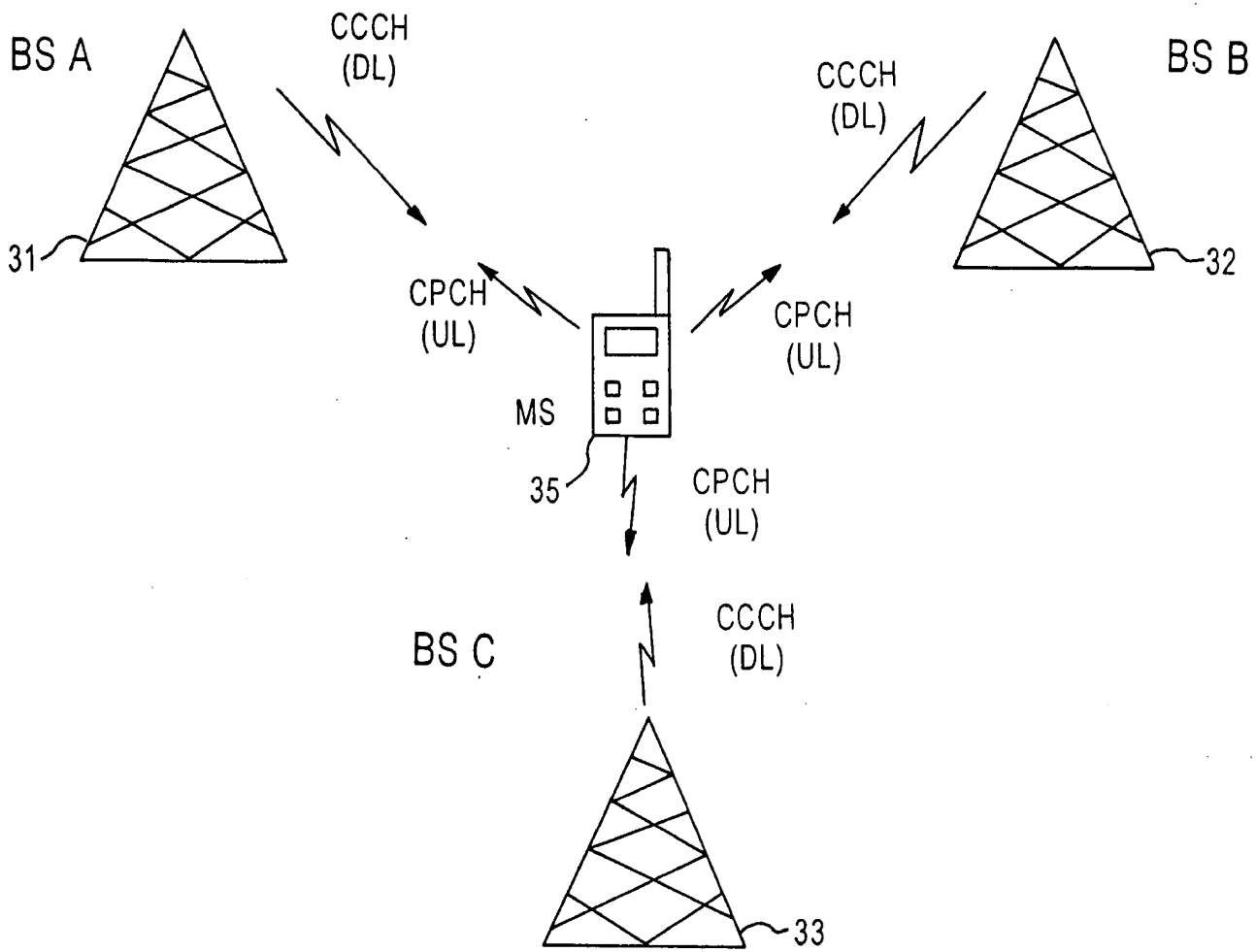

BS A
CCCH
(DL)
CCCH
(DL)
BS B
31
32
CPCH
(UL)
CPCH
(UL)
MS
35
CPCH
(UL)
BS C
CCCH
(DL)
33

FIG. 1

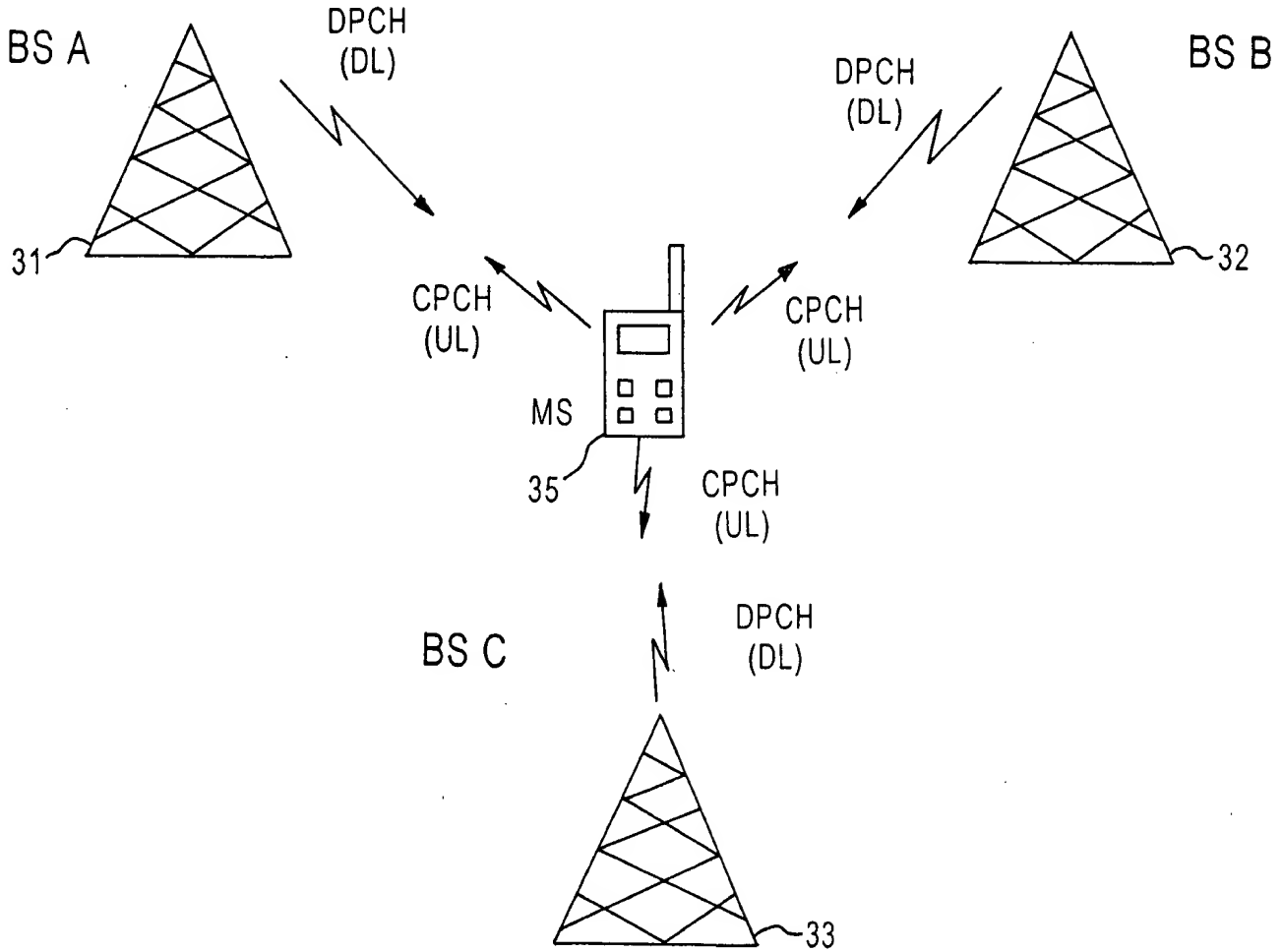

BS A
DPCH
(DL)
DPCH
(DL)
BS B
31
32
CPCH
(UL)
CPCH
(UL)
MS
35
CPCH
(UL)
BS C
DPCH
(DL)
33

FIG. 2

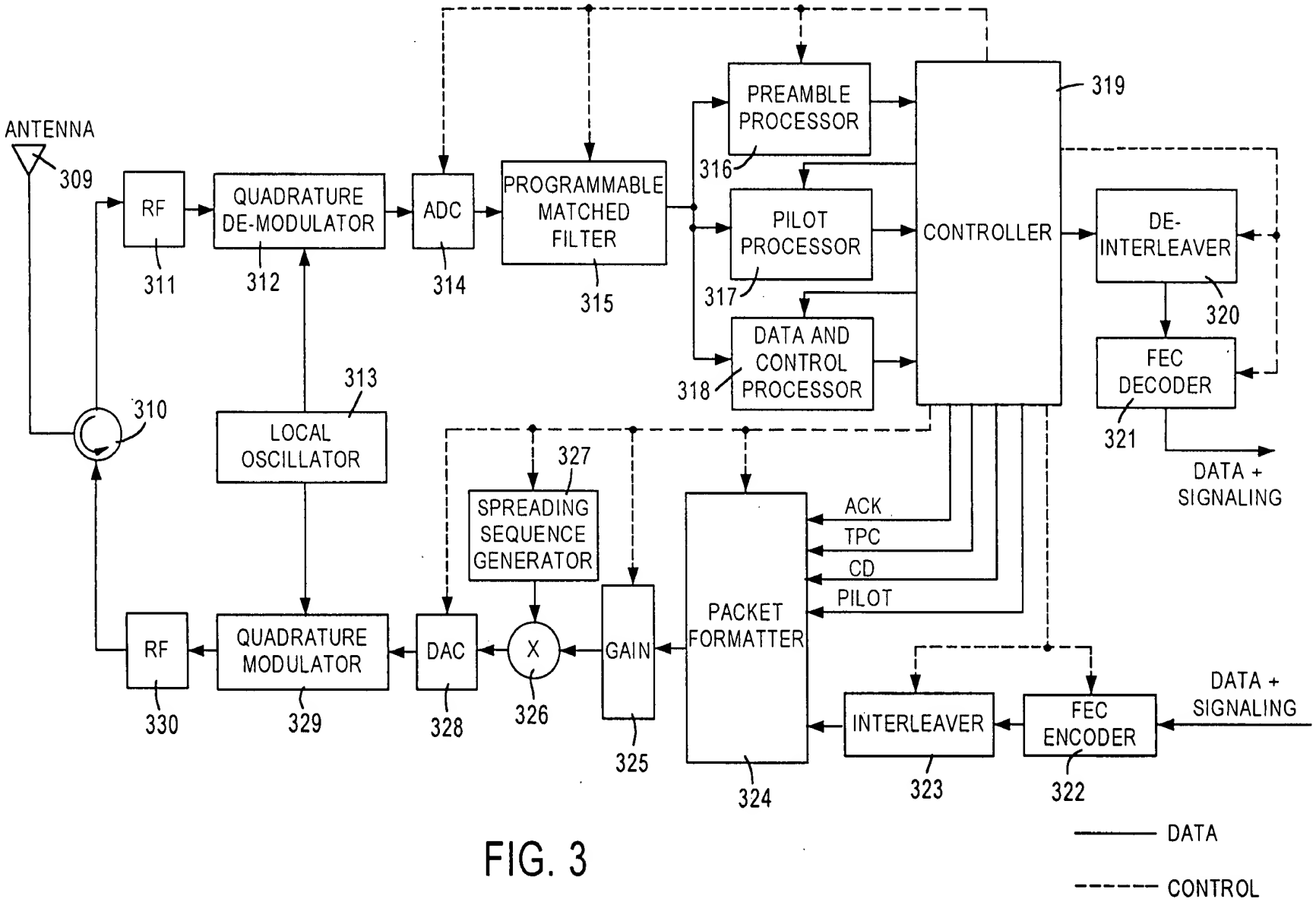

ANTENNA
309
RF
311
QUADRATURE DE-MODULATOR
312
ADC
314
PROGRAMMABLE MATCHED FILTER
315
PREAMBLE PROCESSOR
316
PILOT PROCESSOR
317
DATA AND CONTROL PROCESSOR
318
CONTROLLER
319
DE-INTERLEAVER
320
FEC DECODER
321
DATA + SIGNALING
313
310
LOCAL OSCILLATOR
327
SPREADING SEQUENCE GENERATOR
ACK
TPC
CD
PILOT
PACKET FORMATTER
RF
330
QUADRATURE MODULATOR
329
DAC
328
X
326
GAIN
325
INTERLEAVER
323
FEC ENCODER
322
DATA + SIGNALING
324
DATA
CONTROL

FIG. 3

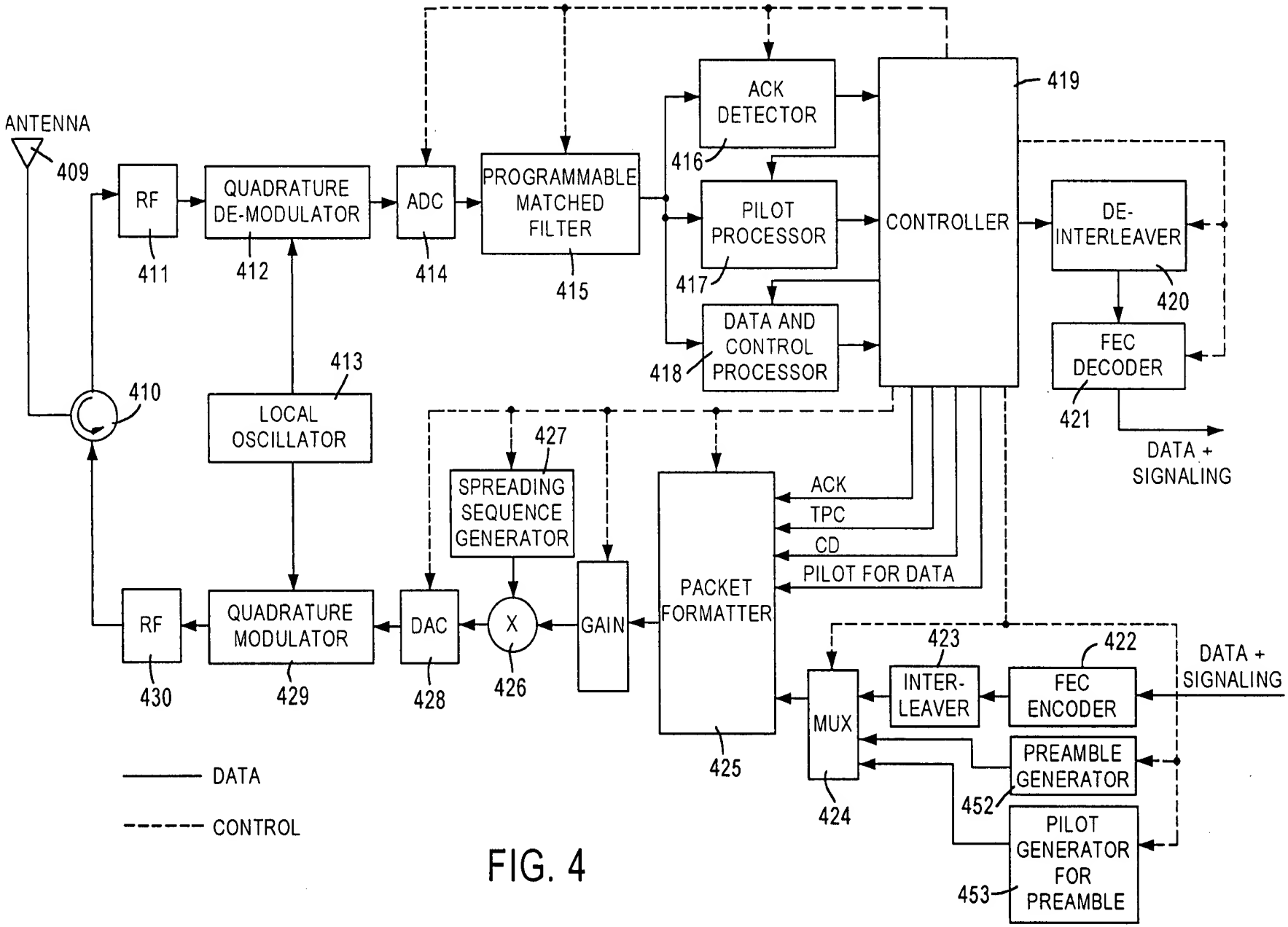

ANTENNA
409
RF
411
QUADRATURE DE-MODULATOR
412
ADC
414
PROGRAMMABLE MATCHED FILTER
415
ACK DETECTOR
416
PILOT PROCESSOR
417
DATA AND CONTROL PROCESSOR
418
CONTROLLER
419
DE-INTERLEAVER
420
FEC DECODER
421
DATA + SIGNALING
410
LOCAL OSCILLATOR
413
SPREADING SEQUENCE GENERATOR
427
ACK
TPC
CD
PILOT FOR DATA
PACKET FORMATTER
425
GAIN
X
426
DAC
428
QUADRATURE MODULATOR
429
RF
430
MUX
424
INTER-LEAVER
423
FEC ENCODER
422
DATA + SIGNALING
PREAMBLE GENERATOR
452
PILOT GENERATOR FOR PREAMBLE
453
DATA
CONTROL

FIG. 4

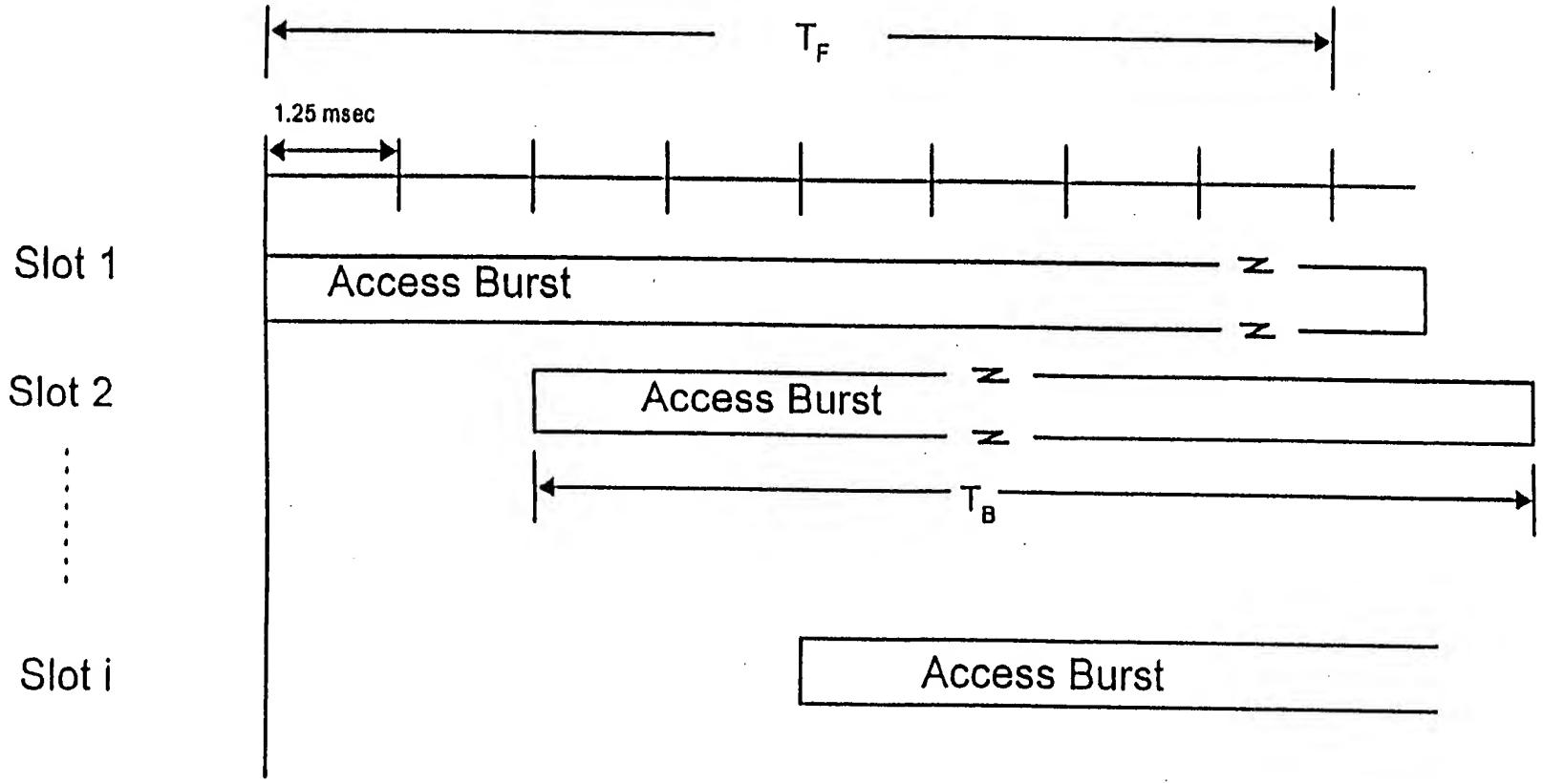

T_F
1.25 msec
Slot 1
Access Burst
Slot 2
Access Burst
T_B
Slot i
Access Burst

FIG. 5

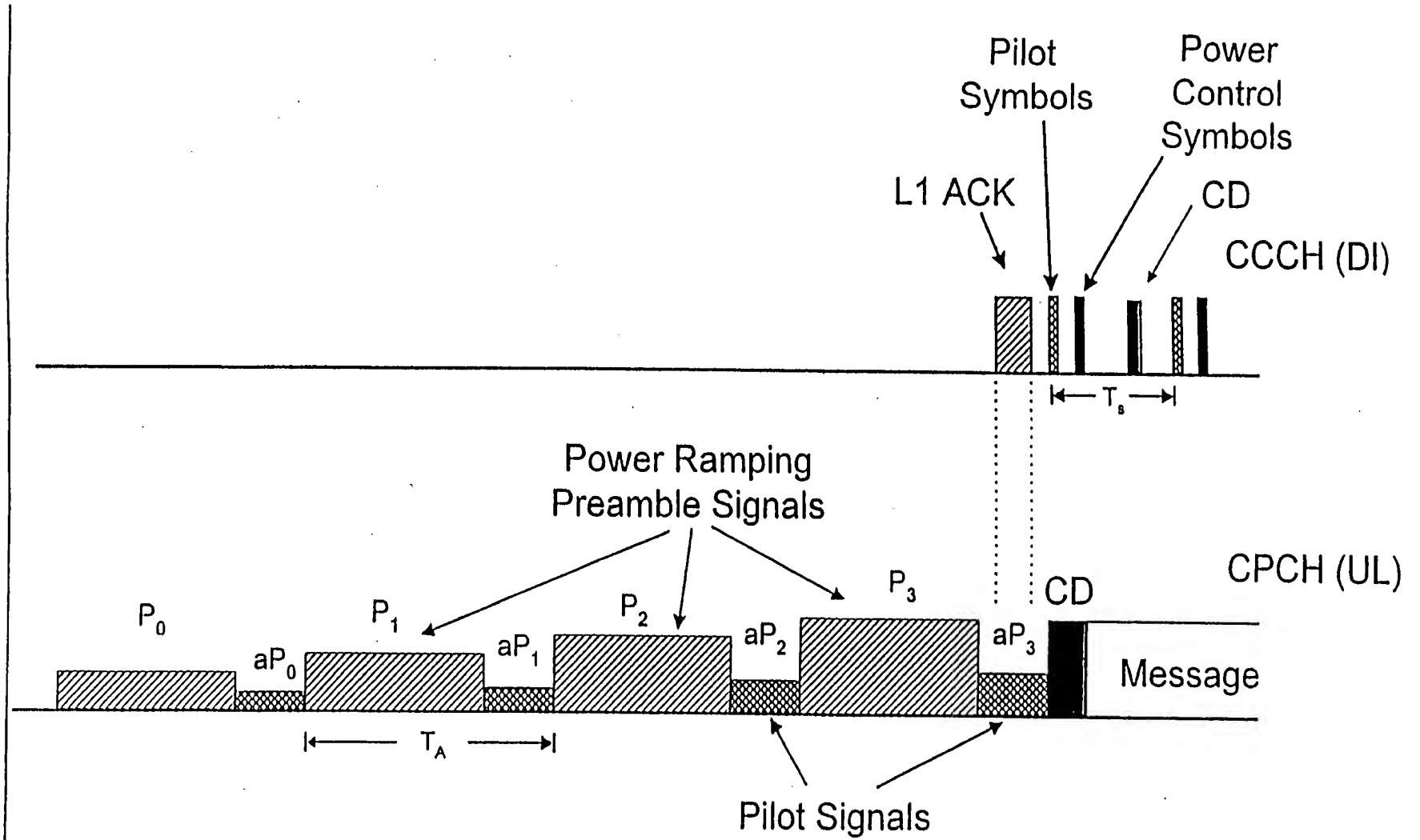

Pilot Symbols
Power Control Symbols
L1 ACK
CD
CCCH (DI)
T_s
Power Ramping Preamble Signals
CPCH (UL)
P_0
aP_0
P_1
aP_1
P_2
aP_2
P_3
aP_3
CD
Message
T_A
Pilot Signals

FIG 6

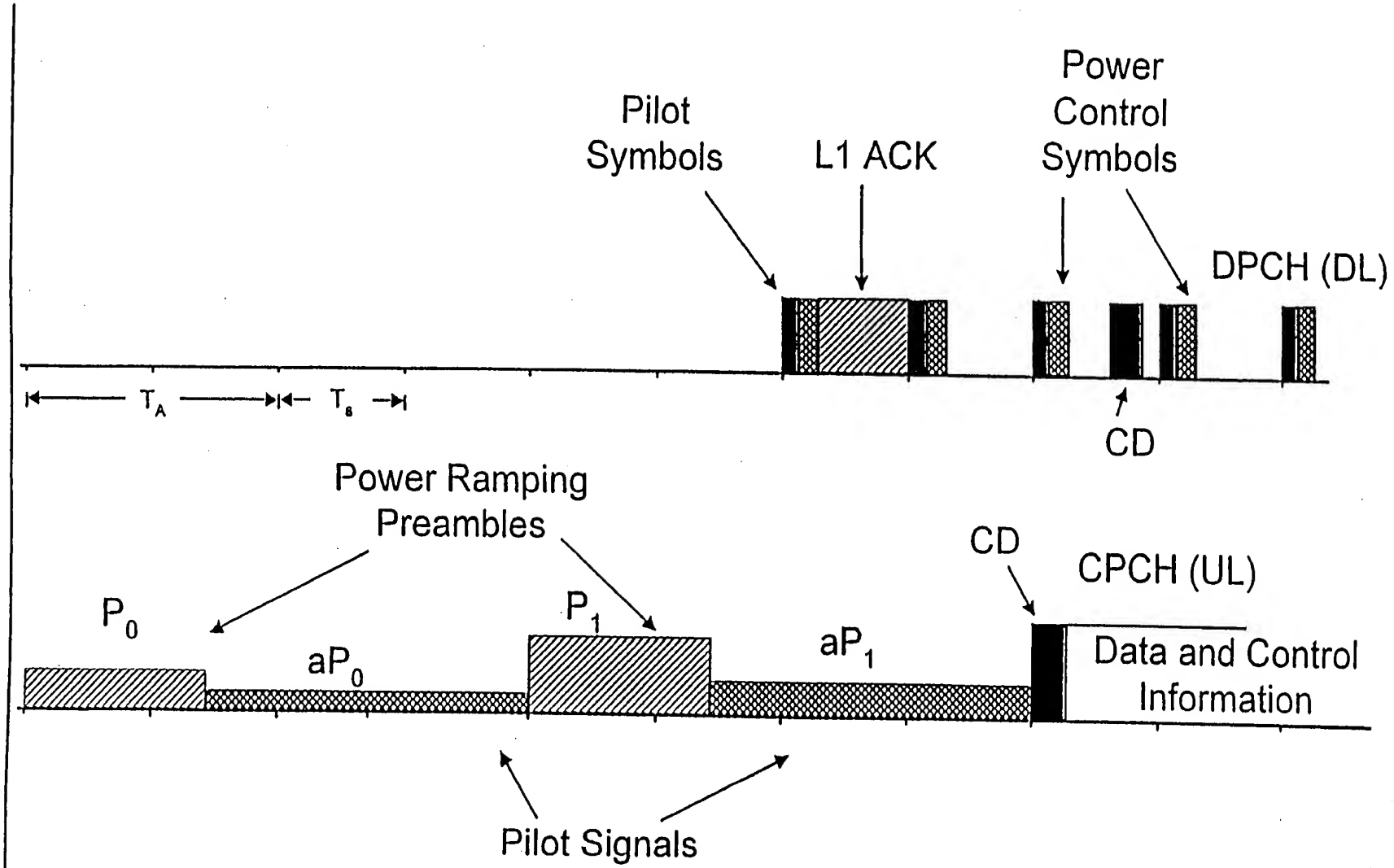
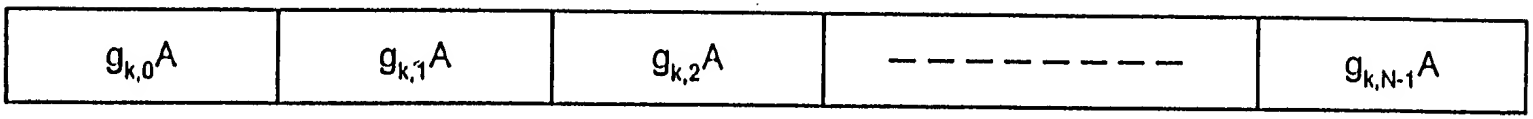
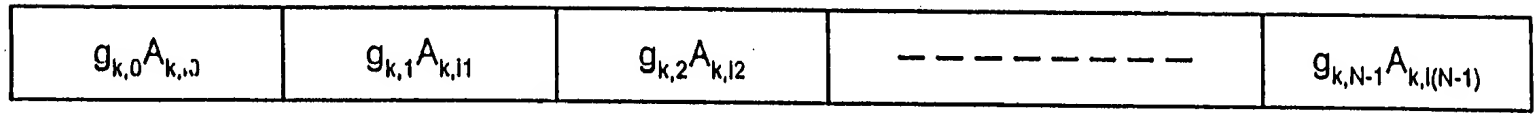

Pilot Symbols
L1 ACK
Power Control Symbols
DPCH (DL)
T_A
T_s
CD
Power Ramping Preambles
P_0
aP_0
P_1
aP_1
CD
CPCH (UL)
Data and Control Information
Pilot Signals

FIG 7



(A)

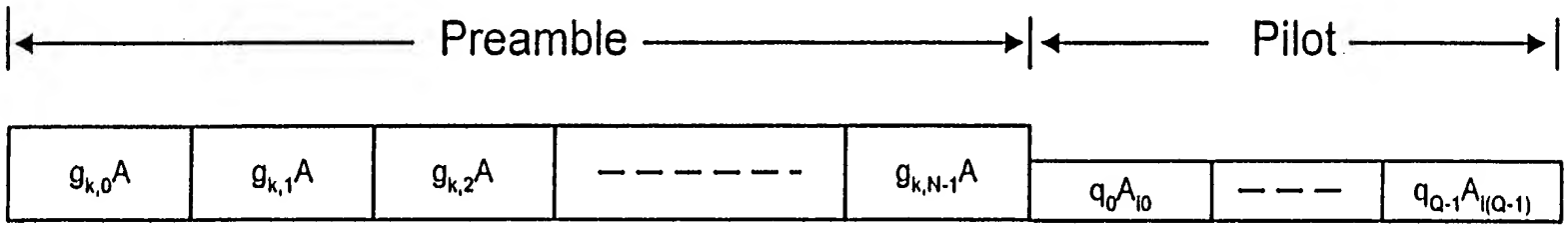


$A_{k,ij} \in [A_0, A_1, A_2, \ldots\ldots, A_{N-1}]$

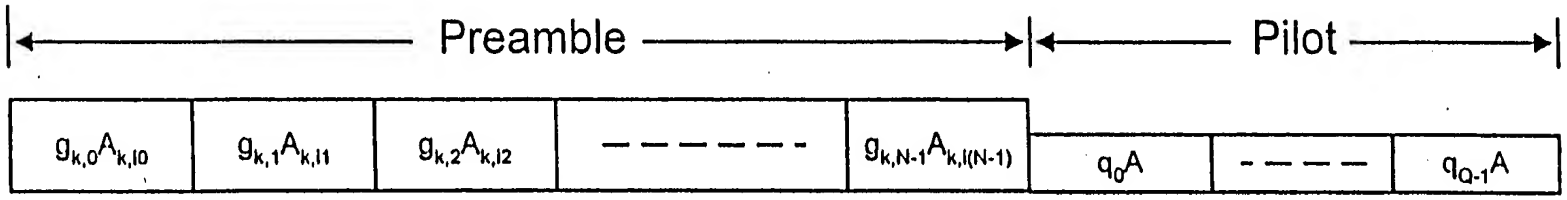
$A_{k1,ij} \neq A_{k2,ij}$

(B)

FIG 8



(A)



$$A_{k,ij} \in [A_0, A_1, A_2, \ldots\ldots, A_{N-1}]$$

$$A_{k1,ij} \neq A_{k2,ij}$$

(B)

FIG 9

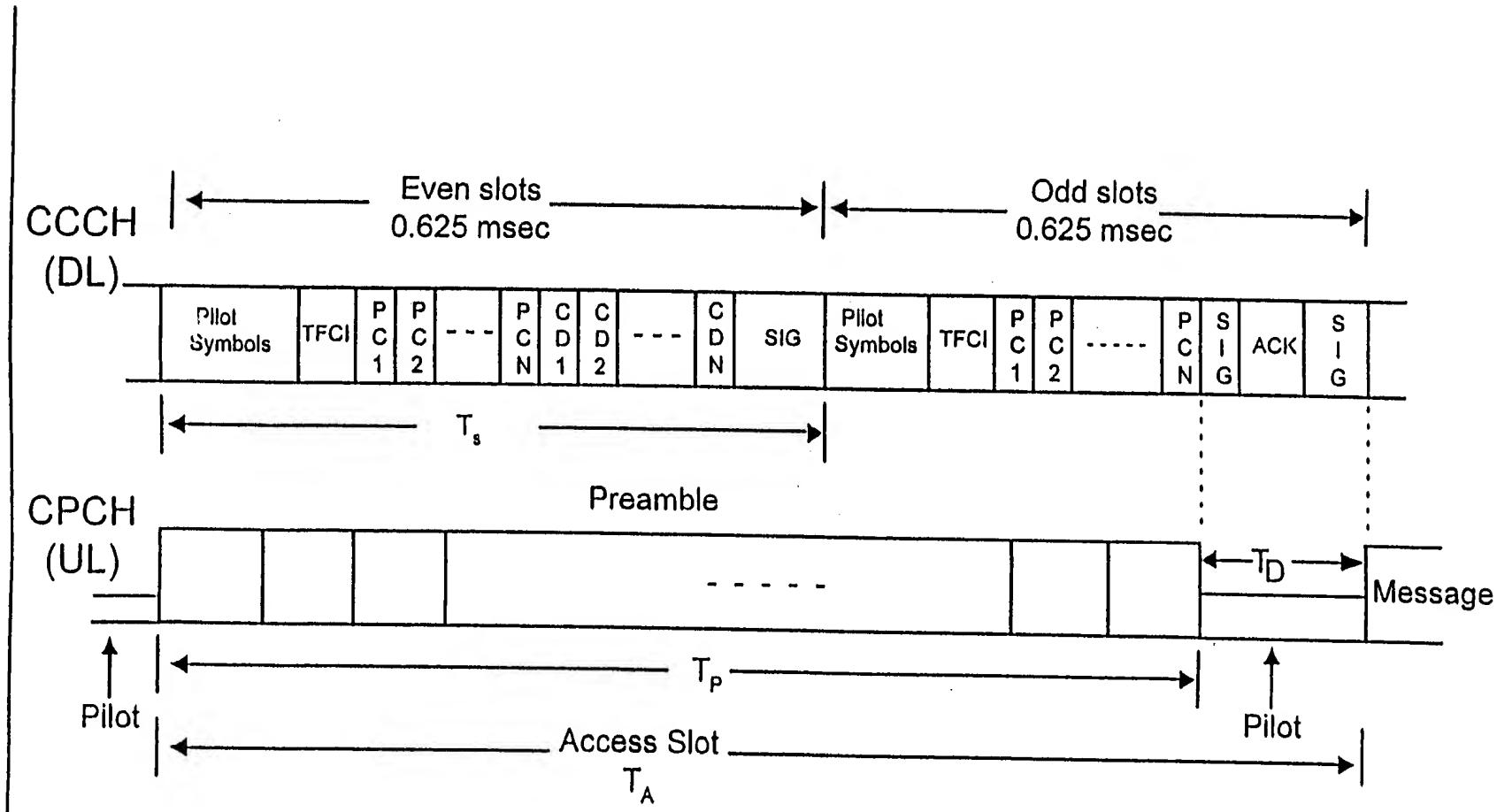

CCCH
(DL)
Even slots
0.625 msec
Odd slots
0.625 msec
Pilot Symbols
TFCI
PC1
PC2
- - -
PCN
CD1
CD2
- - -
CDN
SIG
Pilot Symbols
TFCI
PC1
PC2
- - - - -
PCN
SIG
ACK
SIG
T_s
CPCH
(UL)
Preamble
- - - - -
T_D
Message
T_P
Pilot
Pilot
Access Slot
T_A

FIG 10

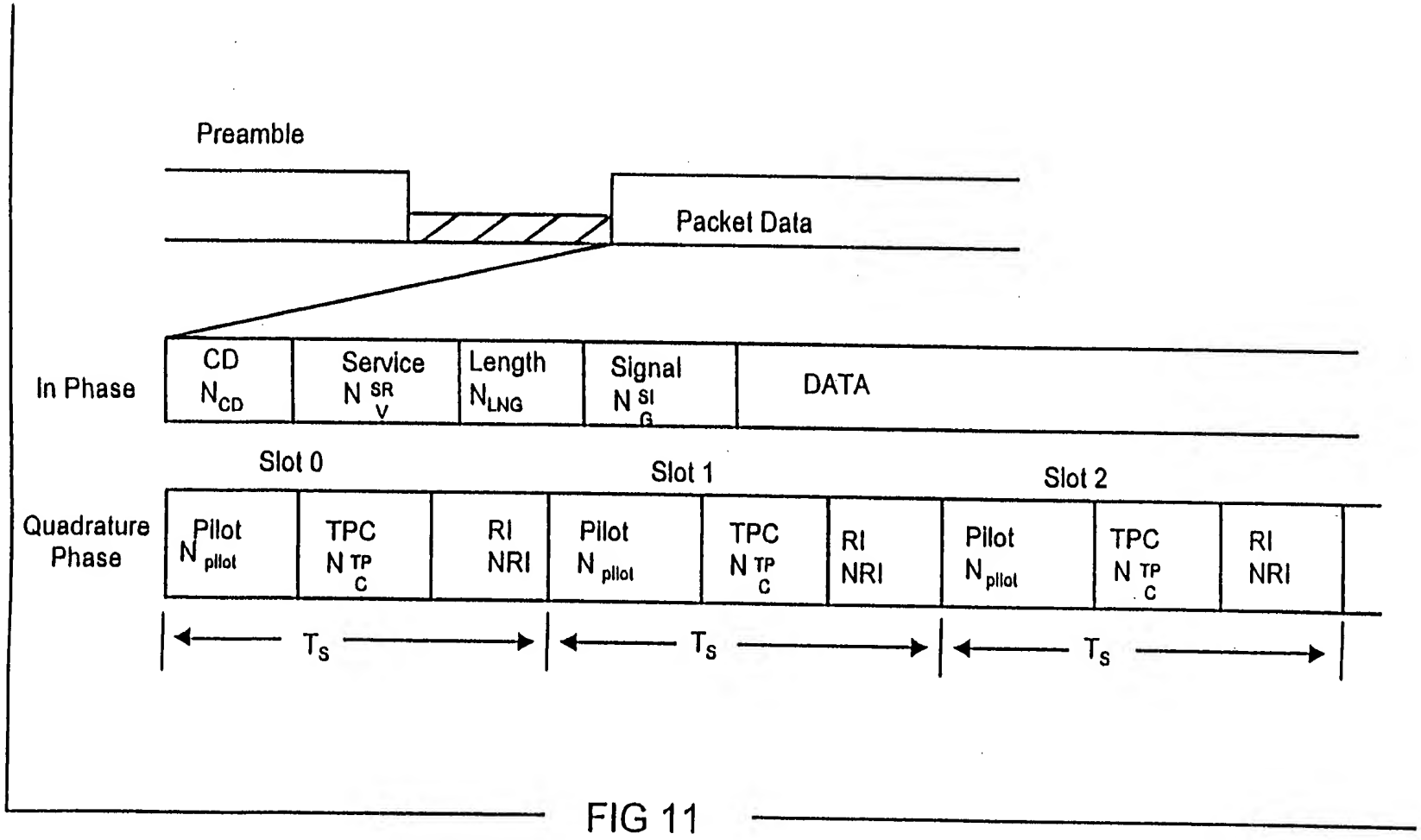

Preamble
Packet Data
In Phase
CD
N_{CD}
Service
N_{SRV}
Length
N_{LNG}
Signal
N_{SIG}
DATA
Slot 0
Slot 1
Slot 2
Quadrature Phase
Pilot
N_{pilot}
TPC
N_{TPC}
RI
NRI
T_S

FIG 11

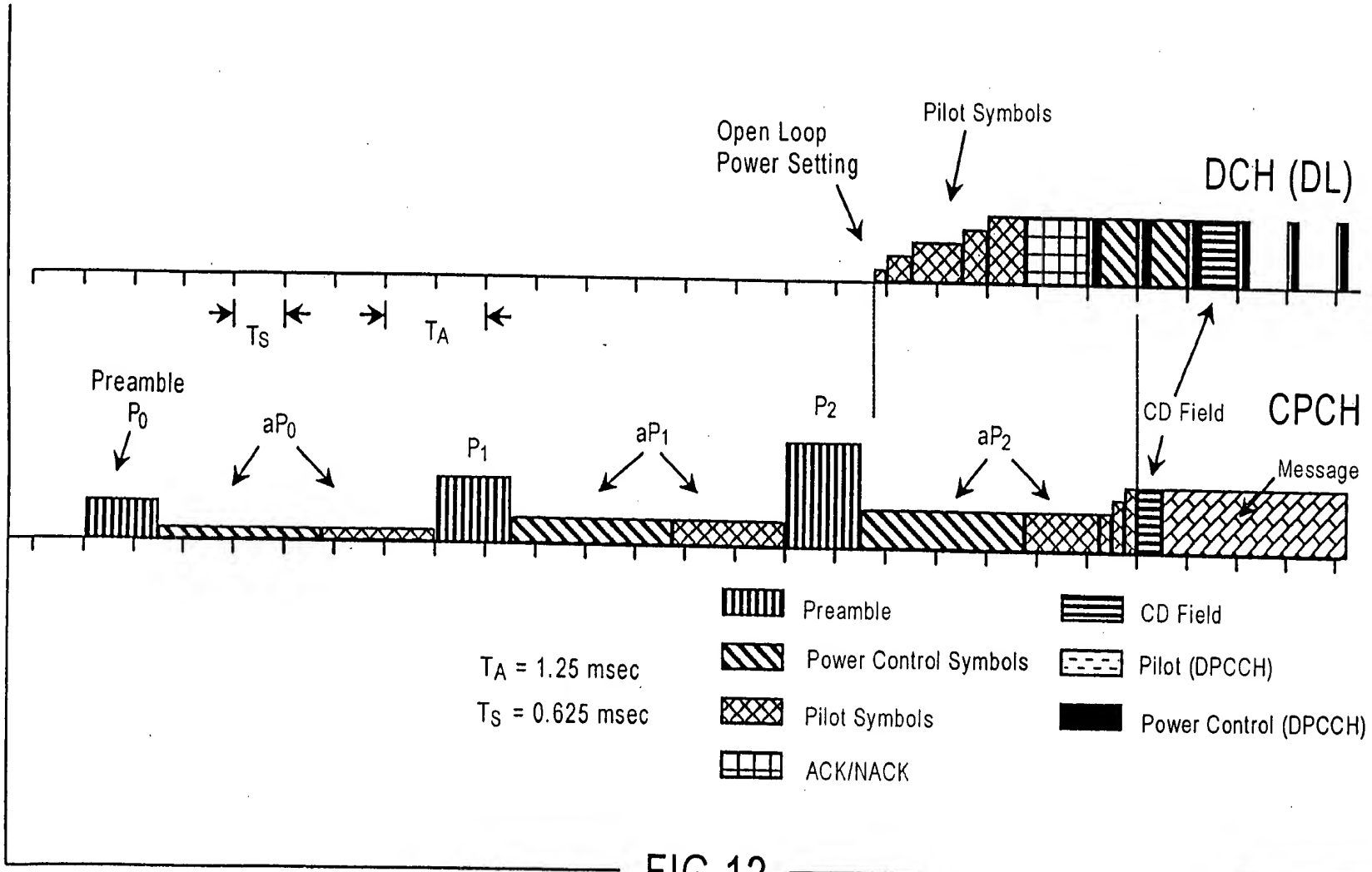

Open Loop
Power Setting
Pilot Symbols
DCH (DL)
T_S
T_A
Preamble
P_0
aP_0
P_1
aP_1
P_2
aP_2
CD Field
CPCH
Message
T_A = 1.25 msec
T_S = 0.625 msec
Preamble
Power Control Symbols
Pilot Symbols
ACK/NACK
CD Field
Pilot (DPCCH)
Power Control (DPCCH)

FIG 12